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June 11, 2021

VIA ELECTRONIC FILING

Ms. Jocelyn Boyd
Chief Clerk and Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, SC 29210

Re: Measures to Be Taken to Mitigate Impact of Threats to Safe and Reliable Utility Service, Docket No. 2021-66-A

Dear Ms. Boyd:

Pursuant to Commission Order No. 2021-163, enclosed for filing are the comments of Piedmont Natural Gas Company, Inc.

Thank you for your assistance with this matter. If you have any questions regarding this filing, you may reach me at the number shown above.

Sincerely,

/s/ T. Richmond McPherson III
T. Richmond McPherson

TRM/sko

Enclosure

cc: ORS
Bruce Barkley
Pia Powers
James Jeffries

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2021-66-A

In the Matter Of	)	
	)	
South Carolina Office of Regulatory Staff's	)	
Motion to Solicit Comments from Utilities	)	**COMMENTS OF**
and Other Interested Stakeholders Regarding	)	**PIEDMONT NATURAL GAS**
Measures to Be Taken to Mitigate Impact of	)	**COMPANY, INC.**
Threats to Safe and Reliable Utility Service	)	
	)	

Pursuant to the Public Service Commission of South Carolina's ("Commission") March 10, 2021 *Order Establishing Docket and Guidelines for Comments by Utilities and Other Interested Stakeholders Regarding Mitigation of Impact of Threats to Safe and Reliable Utility Service* ("March 10 Order"), Piedmont Natural Gas Company, Inc. ("Piedmont" or the "Company") hereby submits the following Comments.

PROCEDURAL HISTORY OF THIS DOCKET

1. On February 19, 2021, in response to the extreme winter weather event in Texas, Governor Henry McMaster submitted a letter to the South Carolina Office of Regulatory Staff ("ORS") Executive Director Nanette Edwards requesting that the ORS undertake a comprehensive review of South Carolina's public and private power grid to evaluate its ability to withstand potential ice storms and other dangerous winter weather conditions.

2. On February 22, 2021, the ORS filed a motion with the Commission requesting the Commission to open a docket and require electric and natural gas utilities to provide information to the Commission regarding measures that have been, or will be taken

to: 1) mitigate negative impacts of ice storms and other dangerous weather conditions to the provision of safe and reliable utility service; and 2) ensure peak customer demands on the utility system can be met during extreme weather scenario ("Motion").

3. The Commission granted the ORS' Motion in the March 10 Order. The March 10 Order establishes specific information and assessments that electric and natural gas utility providers and other electric and gas non-regulated utilities that participate in this docket must provide to the Commission. Specifically, the March 10 Order requires the following information and assessments: 1) identification of threats to utility service; 2) identification of the impacts to utility service; 3) assessment of vulnerabilities; 4) assessment of risks to utility service; 5) identification of resiliency solutions; 6) identification of other federal and state reliability requirements; 7) assessment of current utility processes and systems to withstand potential ice storms and other winter weather conditions; and 8) identification of best practices, lessons learned, and challenges to utility service.

4. Piedmont hereby submits the following Comments in response to the March 10 Order.

COMMENTS

In these comments, Piedmont addresses the specified subjects from the March 10 Order. In Piedmont's discussion of threats to utility service, it also provides its assessment of the extent to which the threats could impact Piedmont and its customers ("Assessment of Threat"), an assessment of the risks to the provision of natural gas service ("Assessment of Risks"), and the Company's resiliency solutions to mitigate the threat ("Solutions").

I. THREATS TO UTILITY SERVICE.

The five items shown below represent the primary threats to the provision of natural gas service to Piedmont's South Carolina customers:

A. damage to or structural deficiencies associated with its pipelines;

B. physical or cyberattack;

C. loss of service from its sole pipeline supplier to the State of South Carolina;

D. extreme cold weather that surpasses the Company's ability to serve its firm customers; and

E. a loss of services such as electricity and telecommunications.

The severity of damage to Piedmont's natural gas infrastructure and the impact on our South Carolina customers due to an incident stemming from one or more of these risks can vary greatly. The primary factors influencing severity include the location of an incident, the size and flow of the impacted pipeline, the duration of an event and whether the problem occurs during periods of heavy natural gas usage. Greater harm will result from incidents occurring at locations that feed large amounts of customers, that cannot be quickly remediated and that occur during periods of heavy consumption due to cold weather. The Company will present information and assessments in these Comments that describe Piedmont's commitment to the prevention of service interruptions for our customers and, in cases where they may occur, our planned processes for response.

A. Damage Or Structural Deficiency Associated With Piedmont's Natural Gas Pipeline System

The most common threat to Piedmont's provision of natural gas service to the citizens of South Carolina is physical damage to our pipeline system. We currently

undertake significant and continuous efforts to mitigate these risks on an ongoing basis which are described below.

1. Third party damage prevention

As required by the federal Department of Transportation's Pipeline and Hazardous Materials Safety Administration ("PHMSA"), Piedmont developed and maintains a written Damage Prevention Program. Piedmont uses the South Carolina One Call System and performs public awareness outreach as recommended by the American Petroleum Institute. This program provides guidance to lessen the probability of incurring excavation damage to underground natural gas distribution and transmission pipelines and is also intended to prevent and minimize the consequences of natural gas released due to damage. Excavation activities include excavation, blasting, boring, tunneling, backfilling, the removal of aboveground structures by either explosive or mechanical means, or other earth moving operations.

The Company regularly communicates to excavators operating within its service territory the existence of its facilities, and the need to notify all utilities of the intention to perform excavation activities. Piedmont maintains a list of contractors who normally engage in excavation activities in the vicinity of its facilities. Safety-focused literature has been prepared in English and Spanish and includes:

- Mailers to registered excavation companies within the Company's service territory
- Newspaper advertising
- Participation in local and State Utility Coordinating Committees
- Participation in the Common Ground Alliance Organization

- Partnering with state 811 advertising
- Information displayed on the Company's website

The information communicated externally via these means details:

- The types of projects that require location of utility lines
- How to recognize a gas leak
- What to do in the event of a gas leak
- How One-Call Centers provide a service to the public to prevent damage to underground utilities by excavation activities
- How to contact the One-Call Centers to learn the location of pipelines before commencing excavation activities
- How excavators can recognize various facility markings through designated paint or flag colors
- Information concerning state mandated time frames for location of utilities prior to the start of construction

The Company holds monthly meetings with our contract locator and outside parties to discuss performance, current and future projects and associated issues.

The Company's Service Line Integrity Program was established for the purpose of identifying inactive services that pose an excavation damage risk. These services can be removed to lower the risk of excavation-related damages.

During field investigations, Piedmont representatives assess damage sites by interviewing involved parties, taking notes and pictures at the site and determining the at-fault party and root cause. They provide education to prevent future damages, complete the necessary documentation and, if applicable, bill the party for the cost to repair the

damage. The Company's contractor's website contains all the damage data, photographs and reports which are used to determine if our programs are lowering excavation damages and to inform the development of new programs.

In late 2019, Piedmont joined the Gold Shovel Standard, a non-profit organization that promotes safe digging practices using standardized performance metrics. Piedmont requires all contractors to be Gold Shovel Certified and remain in good standing with the program. Piedmont and approximately forty of its contractors are certified and are working to establish a target Damage Prevention Incident Rate to continuously lower excavation damages.

2. <u>Future third party damage prevention initiatives</u>

The Company is currently developing an 811 risk ranking model for South Carolina that is scheduled to be completed by August 2021. The software will have the capability to send emails to excavation contractors to inform them that their 811 ticket has been identified as a high-risk excavation. The email will provide safe excavation tips and an email address if they have questions or require additional information.

Subsequently, the Company plans to solicit proposals for a Watch and Protect Program. This program will consist of utilizing the output of the 811 risk ranking model to direct inspectors to sites where high-risk third-party excavation contractors are working to ensure the locate marks are clear and talk to excavators about safe excavation practices. The inspectors will seek to lower excavation damages from frequent offenders and high-risk excavations.

3. Piedmont's integrity management programs

Piedmont is dedicated to ensuring efficient, safe, and reliable delivery of natural gas to customers through diligent design, construction, operation and maintenance of its facilities. The safety of the community, public, customers, employees, and environment are top priorities. The Company believes that pipeline safety, integrity and reliability are ensured through properly applied integrity management principles and a commitment to continuous system improvement that extends beyond the minimum requirements of regulatory compliance.

Piedmont is subject to expansive regulatory requirements imposed by PHMSA under its Transmission Integrity Management Program ("TIMP") and Distribution Integrity Management Program ("DIMP") regulations. These regulations are issued under the authority of Subparts O and P of Part 192 of the regulations of the United States Department of Transportation and are fully binding on Piedmont as a provider of natural gas transmission and distribution services. These regulations require that Piedmont engage in extensive assessment, testing, planning, verification, record-keeping, documentation, inspection, and quality assurance activities with respect to its 79 miles of transmission main (and appurtenant facilities) and its 3,881 miles of distribution main (and appurtenant facilities) located in South Carolina. In compliance with these regulations, Piedmont engages in a broad range of compliance activities, including:

- the analysis and designation of High Consequence Areas ("HCAs") within Piedmont's service territory. HCAs are defined as areas where a potential failure of a pipeline could have significant impact on people or property. It is dependent on the pressure and diameter of the pipe. An HCA is a circle that contains more than 20 structures intended for human occupancy or containing identified sites such as playgrounds, stadiums, campgrounds or buildings with more than 20 people such as churches or office buildings and

buildings that are difficult to evacuate such as day care facilities, nursing homes and hospitals;

- the gathering and review of Piedmont's archived engineering files on its transmission and distribution facilities;
- the actual survey and inspection of Piedmont's transmission lines using smart-pig technology and/or direct assessments;
- the mitigation or repair of flaws and defects detected through smart-pig and/or direct assessment inspections. In most cases, this includes the primary threats affecting pipelines including corrosion, deformation and mechanical damage (including dents, gouges and grooves), material cracking and crack-like defects (e.g. stress corrosion cracking, selective seam weld corrosion, environmentally assisted cracking, and girth weld cracks) and any other threats to which the covered segment is susceptible;
- the removal, repair, replacement, and/or upgrade of certain pipeline segments where necessary to comply with PHMSA regulations either because of administrative documentation deficiencies or because they are non-compliant with current prevailing standards for modern pipeline facilities; and
- pipeline casing remediation and corrosion control.

Piedmont's primary means of inspecting its transmission pipeline as referenced above is smart-pig technology, also known as in-line inspection or ILI. These inspections allow the Company to obtain vital information as a device is inserted into the pipeline and subsequently removed at a downstream location. A diagnostic tool is used to inspect for dents, welding issues, loss of pipe wall thickness and other defects. Piedmont employs a sophisticated risk analysis system that analyzes anomalies in terms of the consequences of failure versus the likelihood of failure. The Company then prioritizes mitigation measures associated with anomalies accordingly. It is important to note that, by design, the TIMP and DIMP requirements of PHMSA are cyclical and iterative. As such, the Company continuously engages in the inspection, assessment, remediation, and documentation cycle with respect to both transmission and distribution pipeline integrity.

PHMSA regulations are also subject to updating and revision. Changes were announced in 2019 that required a confirmation of all transmission pipeline maximum allowable operating pressures and an expansion of testing and documentation beyond the previously defined HCAs. Compliance deadlines extend to 2035 but planning activities are required in the near term. Fifty percent of the maximum allowable operating pressure confirmation work is required by 2028.

Assessment of Threat of Damage to or Deficiencies in Piedmont's System: The impact from either excavator damage or the Company's failure to properly monitor and remediate its transmission and distribution systems could result in loss of natural gas service. However, such damage would likely be localized. The severity of any such service outage would be dependent on several variables including the location of an incident, the size and flow of the impacted pipeline, the duration of an event and whether the problem occurs during periods of heavy natural gas usage. The level of construction activity in Piedmont's South Carolina service territory leads to an increased risk of line strikes by excavators.

Other infrastructure failures could also interrupt natural gas service in a localized manner. However, excluding excavator strikes, the Company's underground pipeline system is unlikely to be damaged or fail. The Company's pipelines are continuously evaluated under its integrity management programs. Pipeline infrastructure is monitored for fitness of service and risks are mitigated through repair or replacement.

Assessment of Risks of Damage to or Deficiencies in Piedmont's System: Risk of service to a small number of customers due to third party excavator damage is high and is likely to occur on at least an annual basis in South Carolina.

The risk of loss of customer service due to failure of Piedmont's pipeline system is low due to the integrity management process and because the pipe is buried several feet below ground.

Solutions to Risk of Damage to or Deficiencies in Piedmont's System: See the narrative portion in this section of the Company's Comments. The Company is working diligently to limit the number of excavator line strikes as outlined above and its robust integrity management programs serve to ensure safe and reliable delivery of natural gas to South Carolina customers. Additionally, the Company maintains business continuity and emergency response plans as explained in detail in a subsequent section of these Comments.

B. Physical Attacks On Our System And Cyberattacks

This category of threat to Piedmont's system is not commonly experienced but can occur and, particularly in the case of cyberattacks, is a realistic threat to the continuity of normal system operations.

Piedmont is a fully owned subsidiary of Duke Energy. Piedmont receives physical and cyber security assistance from experts who are located within Duke Energy Business Services and provide similar services enterprise-wide.

From a physical security perspective, intentional damage to critical equipment via coordinated attacks on infrastructure is a threat to reliable service. This can be conducted through one of the following methods: valve turning, sabotage, theft and resulting

equipment damage. From a cybersecurity perspective, the top threats include compromised remote connections used by vendors, negligent and/or malicious use of removable media, and supply chain compromise. Cyber threats to reliable service can also be coupled with physical threats.

The deployment of ransomware has become an increasingly appealing objective for malicious actors. The Company protects against this attack type and many others with a multi-faceted approach. The foundation of Duke Energy's defense posture is the MITRE Adversarial Tactics, Techniques, and Common Knowledge (ATT&CK®) framework. This is used to continuously evaluate adversary capabilities and position our defenses to interrupt before they can achieve action on objectives. The Company utilizes a nexus of intelligence partners to keep defensive capabilities sharp and emerging vulnerabilities mitigated. Partners include private sector intelligence firms, the federal government, law enforcement, industry intelligence sharing hubs, and open source intelligence.

Physical threats present complex and dynamic challenges that require active and real-time monitoring. The physical processes at Duke Energy are integrated at an enterprise-level by the Enterprise Protective Services internal team of experts. Enterprise Protective Services has a Threat Intelligence Program and Facility Physical Risk Assessment Standard to assess threats and works with Piedmont's Operations teams to implement security mitigations. The Duke Energy Threat Intelligence Program collects, analyzes, and delivers information on threats to the physical and cyber company assets to provide actionable insight to make threat-informed, risk-based decisions. This centralized function continuously protects the infrastructure and information of employees, business partners and customers through alignment of active threat monitoring and analysis

activities across the business. The immediate goals of the Threat Intelligence Program are to provide a holistic understanding of potential threats to better determine mitigation controls necessary to protect people, protect assets, and protect the Company's ability to serve our customers and communities.

The Facility Physical Risk Assessment Standard utilizes a two-pronged approach to evaluate physical security at the most critical facilities:

- A risk-based approach to determine a Facility Security Risk Level classification; and
- A Design Basis Threat approach, which evaluates the vulnerability of physical protection systems against physical threats. Methodologies utilize deter, detect, delay, deny, and communicate security principles.

Cybersecurity is also a critical issue. Duke Energy's cybersecurity team leverages the National Institute of Standards and Technology (NIST) Cybersecurity Framework (CSF) for the establishment and operations of the cybersecurity program. The NIST CSF includes five elements: identify, protect, detect, respond, and recover. This framework not only helps Duke Energy understand cybersecurity risks (threats, vulnerabilities and impacts), but how to reduce these risks with customized measures; additionally, the Company's cybersecurity team is able to respond to and recover from cybersecurity incidents, prompting them to analyze root causes and implement lessons learned with a focus on continuous improvement.

The Duke Energy cybersecurity team also utilizes the Common Vulnerability Standardized System scoring and exploit activity structure to identify and prioritize vulnerabilities on a weekly basis with affected business areas. Depending on scoring, the

necessary response process would be utilized. For example, for a zero-day exploit (a "zero-day" is a vulnerability for which a patch is not currently available, and there is evidence of active exploits) the cybersecurity team would reach out across the potentially impacted business areas for immediate resolution. Zero-day exploits are rare in the operational environment, and by implementation of multiple redundant systems, a long term and wide-ranging compromise would have had to occur. Additionally, without physical access to a system, the adversary's actions could be contained and eradicated allowing recovery to take place.

Duke Energy's security teams routinely collaborate and coordinate with peer utilities, industry partners, government agencies and security organizations to share intelligence, lessons learned and best practices. One valuable avenue to do so is through benchmarking. Benchmarking is conducted with utility companies in the United States, Fortune 500 companies in the financial and technology industries, as well as through industry organizations.

Employees are the first line of defense and imperative to the culture of security within Duke Energy. The Company ensures and implements lessons learned and corrective action programs post-event and consistently drills and exercises processes, plans, and procedures.

The Company's Security Awareness Program leverages national awareness campaigns such as Preparedness Awareness Month (September) and Cybersecurity Awareness month (October) to focus communications in specific areas of security. Additionally, weekly awareness communications are shared enterprise-wide through multiple mediums to remind personnel of their role in protecting the company from security

threats such as phishing e-mails, insider threats and suspicious activity reporting. Duke Energy is dedicated to educating employees to embrace and implement a culture of security.

Assessment of Threat of Physical or Cyberattacks: The impact from physical attacks could result in loss of natural gas service to a significant number of customers. The severity of any such service outage would depend on several variables including the location of an incident, the size and flow of the impacted pipeline, the duration of an event and whether the attack occurs during periods of heavy natural gas usage.

The Company's IT systems are protected by a team of cybersecurity experts who remain vigilant to the ever-present threats. The Company does not believe that a cyberattack on its system would result in a loss of natural gas service to Piedmont's South Carolina customers because of its contingency planning process and our ability to operate in a manual mode. Piedmont's operation in manual mode utilizes trained local pipeline operators who can personally operate its system at key locations.

Assessment of Risks From Physical or Cyberattacks: The underground location of the majority of Piedmont's assets, its culture of awareness, and the centralized team tasked with constantly anticipating and preventing physical attacks contribute to our assessment that the risk of widespread natural gas service interruptions from physical attacks to our operating pipeline infrastructure is low.

The Company believes the risk of loss of natural gas service due to cyberattacks is also low as a result of its comprehensive protection efforts and its ability to operate in manual mode.

Solutions to Risk of Physical or Cyberattacks: As discussed throughout the narrative section above, Duke Energy deploys state of the art proven protection technology, along with the support of security experts who actively deploy threat intelligence and monitor and employ real time actions to identify, protect and detect attempted harm to physical and cyber assets. With comprehensive business continuity programs in place and regular drills and exercises, the Company has programs in place to respond and recover in the event an attack occurs. Business continuity planning and emergency response are discussed in detail in a subsequent section of these Comments.

C. Loss of Gas Supply From Our Interstate Natural Gas Provider

This threat to Piedmont's South Carolina operations is a low probability but high consequence event which is largely beyond Piedmont's direct control.

Piedmont's only source of natural gas supply for the State of South Carolina is Transcontinental Gas Pipe Line Company ("Transco"). A sustained and complete loss of service from Transco would render Piedmont unable to serve its customers in South Carolina. Factors which mitigate this risk include:

- Transco's connectivity with numerous other interstate pipelines.
- Transco's system consists of multiple buried pipelines, therefore a complete outage would require all the pipelines to be disrupted at the same time.
- Transco's ability to serve Piedmont locations in South Carolina can be accomplished via either the traditional south to north flow pattern or from

north to south due to widespread natural gas exploration and development in the northeastern United States resulting from improvements in directional drilling and hydraulic fracturing techniques. Service disruption issues from either direction could be mitigated by increased flow from the opposite direction.

- Piedmont's ability to serve its customers in North Carolina through three liquefied natural gas ("LNG") facilities as well as its ability to access LNG from the Pine Needle LNG facility located near Greensboro, NC. From an interstate pipeline perspective, Piedmont operates its North Carolina and South Carolina system as a single unit. Thus, the usage of LNG in North Carolina allows the Company to increase the amount of gas taken from the Transco system for usage by its customers in South Carolina. This would not provide a material safety net for South Carolina customers if the entire Transco system were inoperable in both directions but could prove valuable if Transco were operating at diminished capacity.

- Piedmont has frequent communication and joint planning sessions with Transco. The two companies have conducted tabletop exercises designed to enhance communication and increase mutual understanding of the respective pipeline systems and to effectuate contingency planning.

Assessment of Threat to Utility Service From Loss of Gas Supply: The impact from this threat could affect all of Piedmont's SC customers up to and including complete loss of natural gas service. Piedmont has no other source of natural gas service available to its customers in South Carolina. The impact would obviously be less severe if an event resulted in partial rather than complete loss of service from Transco.

Assessment of Risks to Utility Service From Loss of Gas Supply: Risk of loss of utility service from a physical attack to Transco's system is low based upon the mitigating factors cited in the narrative section. Piedmont cannot fully assess the risk of lost service due to a cyberattack on Transco as Transco does not share their cyber defense strategies just as Piedmont does not share such strategies. However,

publicly available information posted by Transco's parent company, Williams Companies, indicates the following:

- Williams uses a strategic, risk-based approach to protect our facilities and technologies to ensure the operational security of our critical natural gas infrastructure network, including:
  - around-the-clock monitoring
  - threat detection by a dedicated team using state-of-the-art technology
  - collaboration with federal cyber response experts, law enforcement and industry associations
- Williams has a dedicated cybersecurity team that guards against threats 24/7. Many of these employees are certified and must maintain credentials through continuous education and training. We conduct internal drills several times a year with third-party cyber experts and auditors.
- Williams participates in industry intelligence sharing with trade groups such as INGAA, API and AGA.

Solutions: See narrative section above for resiliency measures associated with this threat. Additionally, the Company maintains business continuity and emergency response plans as explained in detail in a subsequent section of these Comments.

D. Extreme Cold and Other Weather Events

Extreme weather can be a threat to Piedmont's normal operations, but such threat is mostly indirect in nature involving possible loss of electricity or, in the case of flooding, damage to Piedmont's distribution facilities.

1. System planning process

The Company's primary means of ensuring reliable service during the coldest weather conditions is its robust system planning process. Construction of facilities as deemed necessary by this process results in a pipeline system that can serve all firm customers under the most extreme cold temperatures that can be experienced in South Carolina.

This is not a static analysis. The Company continuously compares its modeling results with actual observed conditions. Piedmont's transmission and distribution systems in South Carolina are constantly changing primarily due to the addition of new customers. The needs of residential, commercial and industrial customers vary, and both the number of customers added and the type of customers added result in changes that must be constantly monitored, modeled and implemented. An overview of the system planning process is as follows:

Piedmont's peak day planning utilizes approximately 56 Heating Degree Days ("HDDs"). This is also referred to as a design day and equates to a 24-hour average temperature of approximately 9 degrees F, a result that occurred in Piedmont's South Carolina service territory in the late 1980s. This planning process assumes all firm service customers are reliably served and all interruptible service customers are not consuming natural gas as directed by the Company.

With the assumptions above, the Company applies facility data from our GIS system as well as customer usage data from our customer information system and imports it into our system design analysis software. With this tool, our system planning team analyzes the infrastructure to ensure minimum design requirements for pressure and flow

are available to ensure firm service is retained for all customers up to the 56 HDD target. Should projected pressures or flows indicate areas of the system that are approaching design minimums, additional infrastructure can be proposed to ensure firm service is not interrupted. Piedmont's ability to efficiently site and construct natural gas pipeline facilities is a critical component of the process. Determination of the need for additional is a critical first step, but of no value if the Company is unable to site and construct vital infrastructure required to serve South Carolina customers under the coldest of temperature conditions.

As system models are analyzed, collaboration occurs between System Planning and Gas Supply to ensure natural gas contracts are in place to provide required delivery volumes from our interstate suppliers. This is reviewed annually to ensure Piedmont has aligned supply volumes received from Transco with its pipelines' hydraulic capacity to redeliver natural gas from supply points to customers under design day conditions.

As conditions change, for instance residential customers are added to the system, commercial and industrial customers increase or decrease their needs, or additional pipelines are installed, the hydraulic analysis noted above is performed. This continuous updating and analysis process ensures the Company remains able to serve customers reliably during cold weather.

2. <u>Planning for adequate supplies of gas</u>

This process is explained in testimony provided to this Commission annually. The most recent submission was the testimony of Piedmont witness Jeffrey Patton filed on June 2, 2021 in Docket No. 2021-4-G. One of the items addressed in Mr. Patton's testimony is the Company's process used to ensure adequate supplies are available

on the interstate system under design day conditions. An excerpt from that testimony describing this process is as follows:

> Piedmont reviews historical customer additions, holds discussions with various business leaders/trade allies and field sales employees, and considers forecasts of local, regional and national business drivers (i.e., economic conditions, demographics, etc.) to derive projections of the change in its customer count over time. Presently, Piedmont anticipates that its overall customer base in South Carolina will continue to steadily increase largely due to the positive regional and local economic outlook continuing to support the pace of new residential building.
>
> Piedmont performed a linear regression analysis of its most recent customer data (actual customer sendout data from November 2015 through March 2020 for all customer classes) so as to update its understanding of how our customers use natural gas for base load purposes and in response to weather (i.e. usage per heating degree day). Piedmont then adjoined that customer usage update with its customer growth projections, inclusive of a five percent (5%) reserve margin, in order to arrive at its Design Day requirements.

3. <u>Business continuity plans</u>

As the vast majority of our system is buried, ice or freezing precipitation does not present an issue that likely threatens the provision of natural gas service. The same is true for hurricanes and other typical seasonal storm activity experienced in Piedmont's South Carolina service territory. However, these conditions may present challenges to Piedmont's day-to-day operating procedures. In response to weather or other events identified in these Comments, the Company has developed emergency response and business continuity plans to shield its customers from unusual circumstances to the maximum degree possible. As with physical and cybersecurity, Piedmont's follows Duke Energy's approach to continuity planning and emergency response.

The purpose of the Business Continuity Program, through its overall planning methodology and associated elements, is to minimize risk, mitigate potential losses, and

ensure continuation of critical business operations in the event of a business disruption or disaster until normal operations can be resumed.

The business continuity program includes key elements that:

- Evaluate potential risks that could adversely impact critical business processes;
- Analyze potential impacts to the Company if critical business processes are impaired or cannot operate;
- Develop recovery strategies necessary for the appropriate continuation or resumption of business processes;
- Encourage a scalable and adaptable response framework to support recovery strategies
- Encourage development of prevention and mitigation strategies leveraging exercises, lessons learned, benchmarking and best practices
- Identify key dependencies between critical business processes
- Define a business continuity plan template with the appropriate documentation to guide an effective recovery process;
- Address annual business continuity plan maintenance requirements to help ensure approved and viable plans.

4. <u>Emergency management program</u>

Incident response and emergency management activities are conducted according to the necessary response level based upon the nature of the event.

The Company's Enterprise Emergency Management Program uses the following integrated three-tiered approach to address incidents and crises:

Strategic Focus – Involvement of the enterprise Crisis Management Team for strategic planning relating to mitigation of crisis consequences and impacts to the enterprise, including severe reputational, financial, legal, or regulatory impacts. Duke Energy's Crisis Management Team is comprised of the Senior Management Committee and is activated based on potential or actual severe consequences to company brand, liquidity, and risk issues during incident response and recovery activities.

Enterprise Management – Management and coordination of enterprise-level incidents to provide oversight, coordination and communication during an incident that has the potential to cause significant operational impacts. Duke Energy's Incident Support Team acts as the central management team for incident intelligence and support for activated Incident Management Teams. As incident severity increases per defined thresholds, the Incident Support Team integrates with and briefs the Crisis Management Team as needed.

Operational Focus – Incident Management Teams provide management of emergency response actions to an incident by site personnel or emergency responders. Incident management processes will vary from location-to-location based on operations, local regulations and local capabilities. In most incidents, the local facility will respond to minor incidents without assistance. Larger incidents may require off-site support, possibly from the community, other industry, or other business units. As incident severity increases per defined thresholds, Incident Management Teams integrate with and brief the Incident Support Team as needed.

The Company has implemented the Incident Command Structure Event Response Organization to rapidly and efficiently support a successful emergency response throughout the organization. The Incident Command Structure is the nationally accepted model for responding to incidents in accordance with the National Incident Management System. The Incident Command Structure establishes an organized way to respond to emergencies using standard job roles, forms and terminology. This method of organizing an emergency response is used for short- and long-term operations across the government, industry and private sector. As a common structure, the Incident Command Structure ensures a fast and efficient emergency response. The most important benefit provided is the clear identification of the response leader and their chain of command. This approach is designed to optimize operational, planning and logistics capabilities while providing effective communication to our customers and partners.

Assessment of Threat to Utility Service From Extreme Weather: Failure to adequately plan and build infrastructure necessary to serve Piedmont's growing system or to obtain sufficient quantities of natural gas supply could result in widespread service interruptions. The Company's system planning and natural gas planning processes, as described above, have effectively functioned without fail and are constantly reevaluated for current conditions.

Assessment of Risks From Extreme Weather: Risk is low. Piedmont's employs a reasonably conservative approach to system and gas supply planning. Piedmont has never failed to serve customers in any jurisdiction due to inadequate system design or construction or insufficient gas supply planning.

Solutions: As described above, Piedmont provides its natural gas planning process and results to the South Carolina Public Service Commission annually in its gas cost prudence proceedings.

System planning is continuously performed on state-of-the-art planning tools by highly qualified engineers with extensive experience with Piedmont's customers and pipeline system in South Carolina.

In the event of unusual activity, Piedmont employs a well-documented business continuity plan and an emergency response plan featuring an incident command model.

Finally, Piedmont installs and maintains its above ground equipment to operate under the coldest weather anticipated in our service territories. Items such as gas-fired heaters at key locations on its system to prevent natural gas from getting cold enough to freeze equipment, adding heat tracing wire on select equipment and actively monitoring the gas system at all times from our Gas Control facility all combine to ensure peak operation of the gas system during the coldest days.

E. Loss Of Services Such As Telecommunications, Electricity And Gasoline

Piedmont is fully prepared to serve customers with reliable and safe service considering losses to these services. The Company's manual operating plan allows continuous service during service telecommunications and/or electricity interruptions. As part of Piedmont's Emergency Response and Business Continuity Planning as discussed above, Piedmont partners with Duke Energy to maintain fuel contracts with national vendors to provide gasoline and diesel fuel for critical operations during weather events

and supply disruption events. Further, much of the Company's fleet of vehicles is equipped to run on compressed natural gas, facilitating customer service during gasoline shortages such as experienced in May 2021 due to the Colonial Pipeline outage.

Assessment of Threat: Minimal, some responses to customer requests may be slower under Piedmont's manual operating plan, but natural gas service will not be interrupted.

Assessment of Risks: None from this threat unless the threat were to last for an unprecedented time period.

Solutions: Piedmont's manual operating plan allows continuous customer service. The Company's fleet of vehicles can use compressed natural gas during gasoline shortages or refuel from fuels storage depots coordinated through the emergency response procedures.

II. COST IMPACTS TO PIEDMONT AND ITS CUSTOMERS ASSOCIATED WITH A LOSS OF NATURAL GAS SERVICE. SPECIFICALLY, THE IMPACTS TO CUSTOMER BILLS DUE TO INCREASES IN FUEL AND OTHER COSTS SHOULD BE IDENTIFIED.

Piedmont's cost to reconnect natural gas service for its approximately 155,000 customers in South Carolina is reasonably estimated at $100 per customer or $15,500,000. If these costs are collected ratably based on volumes from all customers billed under Piedmont's South Carolina tariffs, the impact for the average residential customer would be approximately $45. Commercial and industrial impacts vary based upon consumption.

The market price of natural gas would not be impacted by loss of service on Piedmont's system in South Carolina.

The Company notes but cannot quantify other costs potentially associated with the loss of natural gas service. This could include property losses resulting from burst pipes or other impacts of freezing or unacceptably low temperatures. This could also lead to injury or death from either the cold conditions or from unsafe practices associated with heating structures that have lost natural gas service.

III. IDENTIFICATION OF OTHER FEDERAL AND STATE RELIABILITY REQUIREMENTS. OTHER FEDERAL, STATE AND/OR LOCAL RELIABILITY AND RESILIENCE REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, JOINT RELIABILITY PLANS OR ASSESSMENTS, COORDINATING AGREEMENTS, AND WHOLESALE PURCHASE AGREEMENTS.

Specific levels of natural gas reliability have not been promulgated by federal or state authorities. Note that any loss of natural gas service is rare and widespread losses have never been experienced by Piedmont. Refer to Section I.A of these Comments for a discussion of PHMSA's oversight of natural gas pipelines.

IV. AN ASSESSMENT OF CURRENT UTILITY PROCESSES AND SYSTEMS TO WITHSTAND POTENTIAL ICE STORMS AND OTHER WINTER WEATHER CONDITIONS.

This includes identification and exercises of utility plans, processes, and infrastructure to determine if current utility preparedness plans to ensure utility service meet peak customer demand under extreme scenarios. Identify areas for improvement and steps taken to address the areas of improvement.

See Section I.D of these Comments for a description of preparations to ensure the provision of safe and reliable natural gas service under the coldest weather conditions faced in South Carolina.

V. IDENTIFICATION OF BEST PRACTICES, LESSONS LEARNED AND CHALLENGES TO UTILITY SERVICE.

This includes information related to reliability, lessons learned from similar experiences, and challenges of the provision of safe and reliable utility service under extreme weather conditions and other threats.

Piedmont has never experienced widespread loss of natural gas service in South Carolina or any other jurisdiction. Such events are extremely rare in the natural gas industry. During the recent cold weather event in Texas, natural gas service to customers other than electric power generators was not lost.

Piedmont engages frequently with industry organizations such as the American Gas Association and the Southern Gas Association in order to enhance its understanding of events faced by other natural gas distribution companies. Those groups have sponsored discussions concerning the 2021 Texas event and other disruptive events such as Hurricane Sandy which struck the east coast in 2012.

The Company recognizes the interrelationship between natural gas and electric service. Annual coordination discussions are held between Piedmont, its sole electric generation customer in South Carolina, Duke Energy Carolinas, and the City of Laurens, who provides electricity service to Piedmont's compressor located near DEC's gas-fired plant.

CONCLUSION

Based upon the foregoing, Piedmont respectfully requests that the Commission accept its Comments in this proceeding as set forth above and looks forward to continued participation in this proceeding.

Respectfully submitted, this the 11th day of June, 2021.

Piedmont Natural Gas Company, Inc.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the attached is being served this date upon all of the parties to this docket electronically or by depositing a copy of the same in the United States Mail, First Class Postage Prepaid, at the addresses contained in the official service list in this proceeding.

This the 11th day of June, 2021.

/s/ Sloane K. O'Hare
Sloane K. O'Hare